

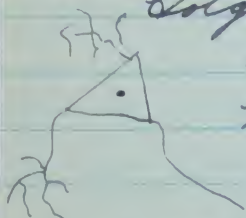
Nervous System.

Peduncles:

Pathways of fibers going between cerebrum & cerebellum (look like stalks) A little removed from spinal cords.

Golgi - particular type of nerve cells.

Damaged quite a bit by alcohol. In motor cortex - grey matter of brain.



Person - nervous - poor control over emotions. Consumed with fear - Over stimulated with emotions. People who actually ~~who~~ have nervous disease has wrong stimulus coming across nerve fibers. Person highly keyed up is not nervous. but how actions effect it. Psychological. Freedom from worry & rest treatment for what is called Nervous Breakdown.

N. matter all bodies - N. matter cell fibers - covered with myelin sheath. Nuclei of N. cells distinct function. If nerve

fiber die myelin sheath fibre instead of dying
multiply & make a new cell. Grey matter
Have no myelin sheath

Synapses all thro' brain & spinal cord.
Cell as long as distance from S. Cord or Brain
to place of destination.

Long fiber - axon. dendron
Short " - dendrite dendrite

20th Nov 1964
 1st day of the trip

Time	Location	Observations	Remarks
8.00	2000 ft. on road	1. 1st day of the trip	1. 1st day of the trip
8.30	2000 ft. on road	2. 2nd day of the trip	2. 2nd day of the trip
9.00	2000 ft. on road	3. 3rd day of the trip	3. 3rd day of the trip
9.30	2000 ft. on road	4. 4th day of the trip	4. 4th day of the trip
10.00	2000 ft. on road	5. 5th day of the trip	5. 5th day of the trip
10.30	2000 ft. on road	6. 6th day of the trip	6. 6th day of the trip
11.00	2000 ft. on road	7. 7th day of the trip	7. 7th day of the trip
11.30	2000 ft. on road	8. 8th day of the trip	8. 8th day of the trip
12.00	2000 ft. on road	9. 9th day of the trip	9. 9th day of the trip
12.30	2000 ft. on road	10. 10th day of the trip	10. 10th day of the trip
13.00	2000 ft. on road	11. 11th day of the trip	11. 11th day of the trip
13.30	2000 ft. on road	12. 12th day of the trip	12. 12th day of the trip
14.00	2000 ft. on road	13. 13th day of the trip	13. 13th day of the trip
14.30	2000 ft. on road	14. 14th day of the trip	14. 14th day of the trip
15.00	2000 ft. on road	15. 15th day of the trip	15. 15th day of the trip
15.30	2000 ft. on road	16. 16th day of the trip	16. 16th day of the trip
16.00	2000 ft. on road	17. 17th day of the trip	17. 17th day of the trip
16.30	2000 ft. on road	18. 18th day of the trip	18. 18th day of the trip
17.00	2000 ft. on road	19. 19th day of the trip	19. 19th day of the trip
17.30	2000 ft. on road	20. 20th day of the trip	20. 20th day of the trip
18.00	2000 ft. on road	21. 21st day of the trip	21. 21st day of the trip
18.30	2000 ft. on road	22. 22nd day of the trip	22. 22nd day of the trip
19.00	2000 ft. on road	23. 23rd day of the trip	23. 23rd day of the trip
19.30	2000 ft. on road	24. 24th day of the trip	24. 24th day of the trip
20.00	2000 ft. on road	25. 25th day of the trip	25. 25th day of the trip
20.30	2000 ft. on road	26. 26th day of the trip	26. 26th day of the trip
21.00	2000 ft. on road	27. 27th day of the trip	27. 27th day of the trip
21.30	2000 ft. on road	28. 28th day of the trip	28. 28th day of the trip
22.00	2000 ft. on road	29. 29th day of the trip	29. 29th day of the trip
22.30	2000 ft. on road	30. 30th day of the trip	30. 30th day of the trip
23.00	2000 ft. on road	31. 31st day of the trip	31. 31st day of the trip

Feb 6 * Nervous System & its functions R

11 June 1961

Binoocular Vision:

Image is formed upon each retina therefore our vision is called binocular. Only one image is seen so long as both eyes are maintained in their correct positions by the eye muscles. Normally, each of the two images formed by any object falls upon a half of either retina; but, as a result of the crossing and re-arrangement of the optic nerve fibers behind the eyes, the two images are recorded on only one side of the brain. The fibers from the left half of each retina go to the left side of the brain, and those from the right half of each retina to the right side of the brain. The result is that only one impression of the object is registered in consciousness. When the eyes are out of line, the two images fall upon non-corresponding halves of the retinas, & the impulses caused thereby pass to both sides of the brain. As mentioned, double vision results.

Hypermetropia

In this condition the diameter of the eye from front to back is too short. The crystalline lens is unable to bend the rays acutely enough to bring them to focus upon the retina. Convex glasses are employed to aid the crystalline lens.

Myopia:

The crystalline lens bends the rays of light to the same degree as in a normal eye, but, since the diameter of the eyeball

from front to back is too great, the retina must be a little beyond the point where the rays come to a focus. The lens is too strong for the length of the eyeball. After the rays come to a focus, in front of the retina, they cross again and, upon reaching the retina, form a blurred image. There is only one way in which the defect of short-sightedness may be overcome — by making the rays of light more radiating before they enter the eye, so that the crystalline lens will be just strong enough to bring them to a focus upon the retina.

Night blindness:

If rods are defective night blindness occurs. The person in daylight is normal but is unable to see in dim lights. Affliction results also from lack of Vitamin A.

Astigmatism:-

Rays of light are brought to sharp points upon the retina but form instead short lines.

15. Colour Vision:- Retina possesses 3 kinds of sensitive cells — one is stimulated by red — one by green — & the 3rd by violet. When white light falls upon the retina all these elements are stimulated & a sensation of white is experienced. Only a part of retina perceive colour sensation — image falling upon other part appear only in black & white.

V. Health of the eyes.

1. Have a good position while reading.
2. Use good light.
3. Do not read on moving vehicles.
4. Do not ~~and~~ rub eyes.
5. Do not open sty's without dr. permission.
6. Wear glasses if supposed to.
7. Rays of sun on water bad for eyes.
8. Wear good sun glasses.
9. Bathe tired eyes in cold water.
10. Do not wear other people's glasses.

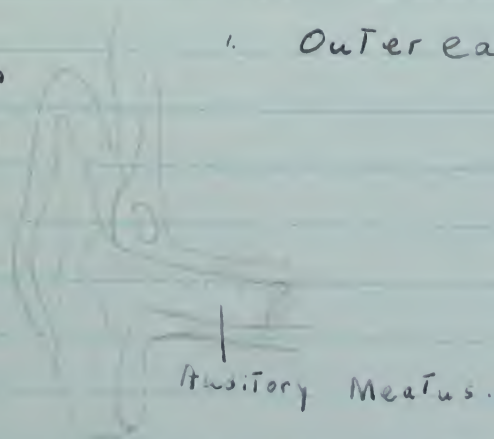
VIII. Health of the ears.

1. Keep external ear clean.
2. Do not ^{touch} external ear with anything.
3. Do not listen to high pitched sounds too long.
4. Do not swim in polluted water.
5. Do not blow nose incorrectly.
6. Float any foreign matter in ear, out with oil or warm clean water.
7. Never let anyone but a dr. put anything into the ear.
8. Beware of diving into water when pressure is too high or too low.
9. Take particular care of the ear during and after an infectious disease.
10. Keep pressure equal on both sides of the ear drum.

VI) The true organ of hearing is the Organ of Corti in middle ear. The Basilar membrane hits the tiny hairlike fibers of Corti — & sets them into vibration. These hair cells will be moved swiftly up & down & will tap in rapid succession upon the floating roof membrane — rate of tap varying with the frequency of vibrations. Each tap will cause a mechanical stimulus — to be given fine nerve twig ending each hair cell. Nervous impulses will then arise & will travel along auditory nerve — it will reach brain (temporal lobe) & sound is produced.

VI Pinna
 or
 Auricle

Outer ear.



Outer ear, ^{auricle & meatus} is open simply for purpose of conducting the sound waves & transmitting them to the next compartment (the middle ear). The auditory meatus is closed at its inner end by the drum membrane — which acts as a flexible partition between the outer & middle ears.

2. Middle Ear



Middle ear is small chamber hollowed out of bone of skull — all walls bony except outer one. (drum membrane) cords which run along side of ^{condemned} drum — provided with little tags of leather by which they can be tightened & parchment cover of drum stretched — muscle which does this is tensor tympani — chain of 3 little bones — slung across middle ear from drum membrane & inner wall of chamber.

Outermost — Shaped like hammer — malleus. Attached firmly to its hammer & drum membrane.

Middle — like tooth or anvil — incus.

Innermost — like a stirrup — stapes.

Foot plate of stirrup fits snugly into small oval window placed in inner wall of middle ear. Window opens into inner ear. Situated a little lower on inner wall is 2nd window — round window closed by thin membrane.

A small tube — Eustachian — runs from middle chamber of ear & back of nose. By means of this air can pass in or out of middle ear & its ^{deep} pressure equal on both sides.